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(57) Abstract :

ABSTRACT ROOTVUE HYDROPONIC KIT The present invention relates to a specialized hydroponic system designed for efficient root phenotyping in plant science research. The key features of the invention include a transparent growth chamber with minimal (90 mL) medium requirement, an opaque outer housing for root protection, and a detachable stem support system with narrow openings to reduce contamination risks. The plug-and-play design, autoclavable components, and integrated calibration markers enable quick setup, easy maintenance, and accurate root growth monitoring. The system's modular nature and support for plants of various sizes make it suitable for a wide range of research applications, as well as educational demonstrations. This novel hydroponic kit represents a significant advancement in the field of root phenotyping technology. Fig. 1

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